

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE EASTERN DISTRICT OF TEXAS
3 TYLER DIVISION

4 CELLULAR COMMUNICATIONS)
5 EQUIPMENT, LLC) DOCKET NO. 6:14cv251
6 - vs -)
7 APPLE INC., ET AL) Tyler, Texas
) 8:31 a.m.
) September 8, 2016

8 TRANSCRIPT OF TRIAL
9 MORNING SESSION
10 BEFORE THE HONORABLE K. NICOLE MITCHELL,
11 UNITED STATES MAGISTRATE JUDGE

12 A P P E A R A N C E S

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20 P R O C E E D I N G S

21 (Jury out.)

22 THE COURT: All right. What do we have this
23 morning?

24 MR. HILL: Your Honor, we have a couple of issues
25 from the Plaintiff's point of view that I think the parties
would like to take up. I know Mr. Caldwell has one in
particular that he would like to address concerning some of
the developments from yesterday. Lucky for me he's just
wandering in.

26 THE COURT: Great.

1 MR. CALDWELL: I'm sorry, Judge. There were some
2 traffic lights on Broadway.

3 MR. HILL: They had a traffic light out there at
4 the mall, Judge.

5 MR. CALDWELL: Just to address some of the --
6 Mr. Sebire's stuff at the end of the day. He's going to go
7 check his e-mails, but there are some things -- and some of
8 these I don't have permission to necessarily publish to
9 everybody else, but we have a -- for example, the main
10 statement where Apple reimbursed him for the rental car. We
11 have the passport stamp. We have the flight numbers. I
12 think we have a person that is a recruiter for Apple on
13 LinkedIn that reached out to him, which I am certainly happy
14 to tell you that name if that's helpful.

15 So, I mean, we have this information. He's about
16 to get on a plane to fly to Japan. So, anyway, to the extent
17 that he was fabricating the story, we've got some things that
18 he was able to find, but I don't want to publish his bank
19 statements or reimbursement so...

20 THE COURT: I understand.

21 MR. CALDWELL: And it says, you know, Apple Inc., 1
22 Infinite Loop, Cupertino; has the amount.

23 THE COURT: Okay. Any response?

24 MR. LUMISH: Yes, Your Honor. We should have
25 talked in advance.

1 So he doesn't need to publish those things. We
2 have gone back. We continued our investigation. As I told
3 the Court yesterday, he's not in our database. There's no
4 evidence of a formal written offer, but we have confirmed a
5 fair amount of what Mr. Sebire said.

6 We're not expecting to need to re-call him on
7 Tuesday -- or next week, I should say.

8 At this point, there's no basis for us to say he
9 testified untruthfully. And so we're not saying that. And
10 we're not asking to re-call him.

11 We are -- we remain concerned with the process, the
12 way things were handled. It's our position that in light of
13 the fact that Mr. Sebire said he told the lawyers in June,
14 that should have been disclosed to Apple; that it was an
15 effort to spring this on us in trial for the courtroom
16 dramatics that we all saw.

17 We were either hindered or completely disabled in
18 our ability to cross-examine him under the circumstances, to
19 prepare rebuttal witnesses. And I think, frankly, we would
20 have brought a motion in limine on something like this
21 because under 403 it's not relevant to the issues at hand.

22 And so on balance, Your Honor, we would ask that
23 the testimony related to the job offer be stricken from
24 yesterday; and that there be no further mention of it in the
25 trial.

1 THE COURT: Your response?

2 MR. CALDWELL: Of course, I -- I don't understand
3 that at all. Mr. Lumish deposed him for seven hours so --
4 you know, we asked Mr. Sebire just conversational questions,
5 asking about if he's had interaction with Apple or if Apple
6 is participating in standards bodies, and it comes out in
7 this context. They didn't ask any other question about it.

8 I mean, he has explained that the correspondence he
9 has is on a personal e-mail account, which, understandably,
10 he wasn't talking to Apple about a job offer through his NSN
11 work account. There's no -- there was never any request for
12 any of that.

13 He wasn't personally -- there was no request for
14 any sort of personal e-mails. I mean, Apple hasn't produced
15 e-mails in this case. E-mail discovery was basically not
16 sought in this case at all. There weren't any ESI requests.

17 So I don't actually understand it at all. I mean,
18 I have a similar -- I had a similar sort of e-mail account
19 that's like that that I've had for 15 years. It's my own
20 domain. And it's also a POP3 mail server that just kind of
21 downloads onto a home computer and is not available on a
22 server.

23 So I don't think there's any reason -- and, I mean,
24 keep in mind it's a bit ironic that we're kind of hearing
25 this where they've been arranging for a while to bring an

1 Ericsson witness that we're going to hear from tonight or
2 tomorrow, and the night before trial we get a bunch of things
3 that, actually, were specifically subpoenaed a long time ago.

4 And then, you know, we didn't get to depose that
5 guy on those. And it is what it is, and the Court told us
6 that, you know -- more politely -- put on our big boy pants
7 and deal with it at trial. And so that's what we're going to
8 do.

9 MR. LUMISH: So the documents weren't subpoenaed
10 from Ericsson. The documents were subpoenaed from NSN. And
11 if they were relevant from Mr. Sebire, they were relevant
12 enough to be used at trial, they should have been disclosed
13 under the Court's rules. Otherwise, Your Honor, I would
14 defer to the Court.

15 THE COURT: I'm going to deny the request to strike
16 that from the record. Given what we know now, is there any
17 reason why I cannot excuse Mr. Sebire, say he doesn't have to
18 worry about coordinating -- potentially coordinating -- y'all
19 represented you're not going to re-call him. I just want to
20 formally let him know he's excused.

21 MR. LUMISH: No -- no objection to that, your
22 Honor.

23 THE COURT: You-all formally let him know he's
24 excused.

25 MR. CALDWELL: Will do.

1 THE COURT: Thank you.

2 What's next?

3 MR. FINDLAY: Yes, Your Honor, we have a couple
4 quick objections. And if I could approach?

5 THE COURT: Sure.

6 MR. FINDLAY: And, Your Honor, these are
7 Plaintiff's Exhibits 56, 156, and 57. And Slide 10 from
8 Mr. Green's deck. I've tabbed one of the exhibits.

9 This is basically -- I'll be very quick, Your
10 Honor. It deals with our motion in limine ruling on
11 conflation between LTE and BSR. We just think he's crossed
12 over that line. They are pictures and Apple surveys where
13 they talk about LTE. The pictures and the diagrams and the
14 description there talks all about the benefits of LTE. There
15 is nothing limited towards buffer status reports. And we
16 just think it does a conflation.

17 I know their -- part of their response will
18 undoubtedly be, well, we've told the jury that we didn't --
19 that we didn't invent LTE. Mr. Sebire has been clear upon
20 that. I would agree with that narrow statement, but
21 conflation, I think, is more than that. And that's what I
22 think this is. And we would ask that it be limited.

23 THE COURT: Response.

24 MR. STEWART: Your Honor, Chris Stewart for the
25 Plaintiff.

1 Basically, what we've presented in the slides we
2 sent over last night, is exactly what we said we would do in
3 both arguments on this issue. In a 65-slide deck, I think,
4 that we sent them last night, three of the slides at the very
5 beginning address these issues related to the technological
6 context for the invention.

7 They are not going to conflate LTE with the
8 patent-in-suit, just like Your Honor instructed us to do.
9 They're simply going to say, as we've always said, this is
10 the technological context. This is why the patent
11 contributes to that context.

12 And there is those two exhibits -- I think 56 and
13 57 -- that just mention, hey, by the way, this LTE concept is
14 somewhat important to Apple and Apple's customers so it's not
15 just a complete, you know, abstract notion. And that's it.

16 Then we move on to talking about the actual
17 evaluation that Mr. Green did in view of the licenses the
18 same way that Mr. Bakewell does.

19 THE COURT: Anything else, Mr. Findlay?

20 MR. FINDLAY: Nothing more, Your Honor. We just
21 think it is the same concern we had before. And I hear
22 Mr. Stewart, but we are concerned about the prejudice that
23 will be made to the jury.

24 THE COURT: Okay. That objection is overruled.

25 What's next?

1 MR. FINDLAY: Just one more, Your Honor, and this
2 is --

3 MR. STEWART: Counsel, may I --

4 MR. FINDLAY: Oh, yes.

5 MR. STEWART: So one issue we had with respect to
6 some deposition clips that are going to be played by
7 Defendants. It's almost, I think, impossible that they'll
8 actually -- actually come up today, but according to
9 procedures, today would be the day we were supposed to raise
10 them.

11 So if Your Honor would like to hear that, we can
12 discuss them now or save them for later.

13 THE COURT: I can hear them now.

14 MR. STEWART: Okay. So the objections relate to
15 deposition testimony of Marvin Key, who is the CEO -- CEO of
16 Acacia Research Corp. They designated roughly ten minutes of
17 testimony from Mr. Key, including about four minutes of
18 somewhat irrelevant testimony about the extent of his
19 knowledge of the CCE patents or the CCE portfolio. There are
20 some questions that get into other litigation between Acacia
21 and other portfolio companies and other Defendants.

22 And so this is just, basically, a series of
23 testimony that goes directly to the corporate character that
24 has been excluded. And we had a similar issue come up in the
25 Smartflash case where, even though Apple agreed to not

1 mention these pejorative terms explicitly and had a lot of
2 agreed MILs, just like we have in this case, they still tried
3 to designate testimony from representatives of the Plaintiff
4 that insinuated as much, without having any probative value
5 towards any issue in the case.

6 And so we have proposed a compromised set of clips
7 that we are okay with. It's about six minutes of testimony
8 that at least gets tangentially into the issues for the jury.
9 But four minutes of it is just irrelevant to anything other
10 than to show that, oh, this guy doesn't know anything about
11 this portfolio, and this is a fake company. To that, we have
12 objected.

13 THE COURT: Response?

14 MR. SIMS: Good morning, Your Honor.

15 This is the Plaintiff's CEO, and they have stated,
16 and we expect them to state that this '820 patent is one of
17 their -- one of the most important patents in this portfolio.

18 We believe this testimony discusses the nature of
19 their thoughts on the '820 patent and the potential
20 negotiations that would -- the negotiations that would come
21 out.

22 With respect to this patent, we are not intending
23 to impair the character of CCE through these designations.
24 They are simply to provide context for the importance of the
25 patent and the negotiation positions of the parties in this

1 case.

2 THE COURT: It's a little difficult for me to make
3 a decision -- without actually seeing the testimony, to make
4 a decision about whether it crosses the line into a MIL. Why
5 don't y'all hand that up, I'll take a look at it this
6 morning, and I'll let you know, all right?

7 MR. STEWART: Yes, Your Honor.

8 May I approach?

9 THE COURT: Yes.

10 MR. LUMISH: We understand this is the objected-to
11 portions only.

12 THE COURT: Okay.

13 MR. STEWART: And, Your Honor, if I could just make
14 one more point as you review this in response to what
15 Mr. Sims said. We actually did not, in our presentation, for
16 example, with Ms. Wagner, go into the subject matter that was
17 objected to as potentially getting into stuff blocked by
18 privilege in Defendants' MIL. We expressly avoided getting
19 into that territory in respect to Your Honor's ruling.

20 And so what this does is, while we were blocked
21 from presenting the testimony on the actual value or the
22 importance of the '820 patent in that context, this asks a
23 different witness: Well, you don't have any opinions on the
24 value, or you don't have any opinions about how
25 technologically important this patent is.

1 And so that's why we think this is prejudicial, in
2 addition to the fact that getting into this sort of territory
3 about the CEO of the company could potentially open the door
4 to lots of issues with respect to Rockstar and other shell
5 companies and similar relationships that Apple has had.

6 THE COURT: Okay. What's next?

7 MR. FINDLAY: Last, Your Honor, I believe from our
8 side is Slide 65 from Mr. Green's report. It's obvious he's
9 going to talk about FRAND.

10 Our position, Your Honor, this has not been
11 adequately disclosed. The only mention of FRAND in his three
12 reports -- I believe this is correct; if not, Mr. Stewart
13 will correct me -- is a footnote at the end of the second
14 supplemental report, which was served on August 18th where
15 he, for the first time, I think, claims that the 15 cents is
16 FRAND analysis. There's nothing in his previous reports on
17 it.

18 He did indicate, I think, in an answer in a
19 deposition, that he claimed it was FRAND, but there's none of
20 the typical analysis you expect to see, and we think to have
21 it come in at this late date is improper, and we ask that it
22 be stricken.

23 MR. STEWART: Your Honor, in Mr. Green's initial
24 report, he did address standard-essential patents and FRAND
25 concepts at a high level. He also discussed the different

1 Georgia-Pacific Factors in detail, including ones that are
2 not as relevant to a FRAND analysis as others.

3 After Mr. Bakewell's report in rebuttal came out,
4 he discussed FRAND at length. In Mr. Green's deposition, he
5 repeatedly, more than one time, multiple times described his
6 opinion that his rate would not change if it was done under a
7 FRAND analysis because the factors that he did consider in
8 his first report are consistent with a FRAND analysis.

9 And then as Mr. Findlay said, on August 18th, in
10 his second supplemental report, he included a reference to
11 the fact that, as he stated in his deposition, his opinion is
12 a FRAND analysis.

13 That's all this slide is going into. It's just
14 confirming that because of the factors that he did and did
15 not consider and the weight he gave them, his opinion is
16 consistent with FRAND, which is in response to Mr. Bakewell's
17 rebuttal.

18 THE COURT: I mean, is that what he's going to say,
19 that his opinion would not change if he did a FRAND analysis
20 or that he did a FRAND analysis? Those seem to be two
21 different things.

22 MR. STEWART: I mean, I think FRAND is a
23 characterization, right? It's fair, reasonable, and
24 non-discriminatory. It's not necessarily an analysis you
25 have to come at from that exact direction.

1 He's saying that the analysis I did is, either in
2 retrospect or from the front end, fair, reasonable, and
3 non-discriminatory because of the way I analyze the
4 Georgia-Pacific Factors.

5 THE COURT: Okay. Response?

6 MR. FINDLAY: I think Your Honor's question is the
7 right one. There's no analysis done of FRAND. I realize --
8 I suppose, if all he's going to say is, well, it would have
9 been the same either -- he did say that in deposition.

10 So if he's going to go no further than that, that
11 might be all right. That might not cross the line. But if
12 he talks about, no, I really did this detailed FRAND analysis
13 and let me tell you about it, that's nowhere in his reports,
14 and we would object.

15 THE COURT: Any argument?

16 MR. STEWART: So Mr. Curry can hop up if I say
17 anything wrong, but I think the way the slide is described,
18 it's simply saying: Here is my understanding of FRAND, here
19 are the factors and the analysis I already did, and it's
20 consistent with FRAND.

21 THE COURT: Is that right, Mr. Curry?

22 MR. CURRY: That's right, Your Honor.

23 THE COURT: I'll let him say that.

24 MR. FINDLAY: Thank you, Your Honor.

25 THE COURT: Anything further?

1 MR. FINDLAY: Not from the Defendants.

2 THE COURT: Thank you, Mr. Findlay.

3 MR. McMANIS: Your Honor, Jason McManis for CCE.

4 We would just offer our trial exhibit list through September
5 7th of 2016.

6 MR. HILL: Your Honor, can I -- can we wait and do
7 that in front of the jury?

8 THE COURT: You bet.

9 If there's nothing further we'll be in recess until
10 9:00 a.m.

11 COURT SECURITY OFFICER: All rise.

12 (Recess.)

13 (Jury in.)

14 THE COURT: Please be seated.

15 Good morning, Ladies and Gentlemen of the Jury.

16 Let's take up any housekeeping matters before we
17 continue with our testimony this morning.

18 Mr. McManis.

19 MR. McMANIS: Good morning, Your Honor. Jason
20 McManis for Plaintiff CCE. We offer our trial exhibit list
21 through September 7th, 2016.

22 THE COURT: Any objection?

23 MR. SANDFORD: No objection, Your Honor.

24 MR. McMANIS: May I approach?

25 THE COURT: Yes. Hand it up, please. Thank you.

1 MR. SANDFORD: Good morning, Your Honor. Brett
2 Sandford for Apple. Apple offers its exhibit list through
3 September 8th.

4 THE COURT: Any objection?

5 || MR. MCMANIS: No objection.

6 THE COURT: Okay. Hand it up.

7 All right. Let's continue with our testimony this
8 morning.

9 Mr. Caloyannides, if you'll come back up here.

I'll remind you that you're still under oath and
you may be seated.

12 MICHAEL CALOYANNIDES, PH.D., PLAINTIFF'S WITNESS, SWORN
13 DIRECT EXAMINATION (CONTINUED)

14 || BY MR. NELSON:

15 Q. Good morning, Dr. Caloyannides.

16 A. Good morning, sir.

17 Q. How many times, sir, have you served as an expert in
18 patent infringement matters generally?

19 A. Oh, quite a few. I would say just a little short of a
20 hundred.

21 Q. And what kinds of companies have hired you to be an
22 expert witness?

23 A. Quite a spectrum. All the way from large companies such
24 as Verizon, Samsung, L3, and so on, all the way down to
25 individual investors -- inventors, I'm sorry, that wanted

1 some technical help with their invention. And I supported
2 them gratis, no charge.

3 Q. In the past have you been retained by both plaintiffs
4 and defendants?

5 A. That is correct, equal amounts, more or less.

6 Q. Dr. Caloyannides, who hired you in this matter?

7 A. In this case I was hired by the attorneys for CCE.

8 Q. And how are you being compensated?

9 A. I'm paid \$200 an hour.

10 Q. Do you have an economic interest in the outcome of this
11 case?

12 A. No, not at all.

13 Q. Dr. Caloyannides, please tell the jury what you were
14 hired to do in this case.

15 A. I was hired to read and understand the '820 patent and
16 determine, to the best of my ability, to what extent is it or
17 is it not infringed by the accused products. And also to
18 review the reports about alleged invalidity of the patent
19 submitted by the opposite side and to comment on that.

20 Q. And how do you go about determining whether a device
21 infringes a particular patent?

22 A. Well, the first and most important task is for me to
23 study the patent very carefully and especially the claims
24 part of the patent. Then I look at any term construction,
25 the definitions of the terms that have been created by the

1 Court.

2 And once this is done, then I compare the claims to the
3 accused products to see whether there is infringement or not.

4 Q. Please describe the types of information that you used
5 to investigate the accused Apple devices in this case?

6 A. It was an extensive collection of things. There was a
7 massive amount of technical documents. I mean massive
8 (indicating) generated by Apple and by others.

9 I also reviewed, with Mr. Jones, the source code that
10 was produced by Apple.

11 I also looked at public information, such as items on
12 the Internet, Web pages by Apple that advertise features of
13 its cell phones.

14 I also reviewed information that was provided by
15 Qualcomm company about the chips that are inserted into the
16 accused products.

17 I also reviewed deposition testimony by a number of
18 witnesses, as well as written discovery responses of some
19 witnesses.

20 Q. How long did you spend --

21 A. I'm sorry.

22 Q. Excuse me?

23 A. I'm sorry. I was not finished.

24 Q. Oh, excuse me. Please continue.

25 A. And lastly, I relied on about half a century of

1 experience in telecommunications of my own.

2 Q. My apologies, Dr. Caloyannides.

3 A. No problem.

4 Q. How long did you spend in connection with this case
5 reviewing all those materials, including the source code?

6 A. Oh, I haven't tallied it up. But including the
7 effort -- current effort here, I would say around 4- or 500
8 hours at most.

9 Q. Was that all on the infringement part of the case?

10 A. No. No. That was roughly half on the infringement part
11 of the case and half on assessing the assertions by the
12 opposite side that the patent is allegedly invalid.

13 Q. Did you prepare a report in this case?

14 A. Yes, I did.

15 Q. Is that a copy of your report on infringement in front
16 of you?

17 A. Yes, that is correct.

18 Q. Is making a report something you typically do as an
19 expert witness in a patent case?

20 A. Every time. That is correct.

21 Q. Does your infringement report identify and reference all
22 of the evidence that you reviewed and considered in this
23 case?

24 A. Yes, it does.

25 Q. And have you formed opinions regarding infringement?

1 A. Yes, I have.

2 Q. And what are those opinions?

3 A. The opinions, in a nutshell, are the accused devices,
4 namely, iPhone 5, iPhone 5C, iPhone 5S, iPhone 6, iPhone
5 6 Plus, and iPads 3, 4, mini, and mini with Retinal Display,
6 plus iPad Air. They all infringe Claims 4, 10, 12, 20, and
7 24.

8 Q. Are your opinions and your basis for them set forth in
9 your report?

10 A. Yes, they are.

11 Q. And one last thing relative to the slide on the screen,
12 the devices that you read under the -- under the column
13 heading "accused devices," do you see that?

14 A. I do.

15 Q. If I refer to them as accused devices or you refer to
16 them as accused devices in the course of your testimony, can
17 we have the agreement that that means these products that are
18 set forth on the screen?

19 A. Yes. That would be very helpful.

20 Q. Okay. Let's turn to the patent itself.

21 Now, Dr. Caloyannides, we've heard a great deal of
22 testimony already about the '820 patent from persons like
23 Mr. Sebire and Mr. Jones. Were you present for their
24 testimony and presentations?

25 A. Yes, I was.

1 Q. So in the interest of time, let's focus on an animation
2 that -- that you prepared. And please describe for the jury
3 what we're seeing.

4 A. In the light of what was discussed yesterday, which I
5 won't waste your time by repeating, a buffer status report is
6 sent by the Apple device, the cell phone, iPad if it has such
7 capability, informing the base station of the type and extent
8 of information on that Apple device that the device wants to
9 upload to the base station. Could be voice, could be
10 whatever else.

11 In response to that, the control -- the tower sends back
12 a grant to the device saying you are hereby granted the
13 following resources to upload the information you wanted to
14 upload.

15 And at that point the Apple device, or any other device
16 that complies with the spec, does exactly that, namely,
17 upload the data that it wanted to upload in the first place.

18 Q. Okay. Let's briefly focus on the data transfer back to
19 the base station, which is the pink or red arrow on the
20 screen; is that right?

21 A. That is correct.

22 Q. Okay. What types of information are in that data
23 transfer?

24 A. It's a vast amount nowadays. It can include, of course,
25 digitized voice; and all voice on cell phones these days is

1 digitized, Facebook, back-and-forth chats, Facebook games,
2 e-mails, web browsing, FaceTime, Pokemon Go, the latest fad,
3 assorted games and on and on, photographs, videos, you name
4 it.

5 Q. Now turning back to the '820 patent, Dr. Caloyannides,
6 what technological problem does the '820 patent address?

7 A. Well, the short version is that cell phones, when they
8 send buffer status reports to the tower, the base station, do
9 that on a very, very regular basis, as in thousands of times
10 per second per device. And with a number of phones doing the
11 same thing, there would be mass confusion as to who is
12 requesting what and when and why.

13 The '820 patent tried to put some order to this mess
14 that was -- without this order, the system would just clog.
15 It would not be able to function. And it did so in a number
16 of ways, which I will be happy to discuss, if you want.

17 Q. Yes. Why don't you elaborate on what Mr. Sebire's
18 solution was to this problem.

19 A. Solution, basically, at the risk of oversimplifying a
20 fairly complex patent, had two parts.

21 One was to appreciate the fact that not all requests for
22 service to the base station by the mobile are of equal
23 length. Some can be shorter and can be accommodated with
24 less size request.

25 So you don't send a long request if a short one will do.

1 That cuts down on the traffic quite a bit. And, of course,
2 the criteria is when to send a short, when to send a long.

3 In addition -- that has not been mentioned too much in
4 the last day or two -- Mr. Sebire realized that just because
5 you want to send a long does not mean that there is the
6 resources to send a long.

7 So you check to see are there resources to send the long
8 based on the selected conditions or not. And that's the
9 short bandwidth check or availability check.

10 And in combination, those two bits of information are
11 the ones that enable the recipe, if you will, offered by the
12 '820 patent to put order and cut quite a bit on the
13 back-and-forth chitchat between the cell phone and the base
14 station.

15 Q. Okay. Let's dive into the patent just a bit. And I see
16 you have a slide of what appears to be two versions of
17 Figure 4 from the '820 patent. And if you could, please
18 explain first what we're looking at on the left-hand side and
19 then what we're looking at on the right-hand side.

20 A. Yes. On the left-hand side, we're looking at a flow
21 diagram, which essentially is a logical description of what
22 is the phone doing and why and when, as shown in Figure 4 of
23 the patent itself.

24 And it shows, for example, what is highlighted in
25 yellow -- I'm not sure why. That is not correct -- has been

1 a connection from the decision point where it says: Is data
2 in multiple buffers? Yes or no? That's in Box 430, pointing
3 to the box labeled 470, which determines buffer priority.

4 Now, on the right-hand side, there is the corrected
5 version of the patent. When I say corrected, I'm not
6 implying that somebody fudged anything here. It's simply a
7 drafting error. The one on the left is plain old simple
8 human drafting error, and the one on the right is the correct
9 one.

10 Q. Okay. Dr. Caloyannides, how do you know that the one on
11 the right is the correct Figure 4?

12 A. Two main reasons, frankly.

13 The first one, the preliminary patent application --
14 "provisional" is the proper term -- by the same inventor has
15 the exact same diagram in his provisional patent, and it's
16 the handed one shown on the right, and in that diagram, it
17 shows the correct version of the flow diagram.

18 So it's evident that the inventor intended that to be
19 the flow diagram in the patent.

20 Q. And this is the same hand drawing from Mr. Sebire that
21 he testified to in this matter?

22 A. That is correct.

23 Q. Okay. And then turning to the patent itself, does that
24 also help us understand that there was just a minor drafting
25 error in Figure 4?

1 A. Yes, definitely do, because, if one looks at the patent
2 itself, the way it describes what the Figure 4 does, what the
3 patent describes is the corrected Figure 4, which is not in
4 the patent because of the drafting error, but the erroneous
5 Figure 4.

6 And that's the wording. Says, if there's not enough
7 uplink capacity to use the long format, then the method 400
8 continues by determining 470, the buffers and so on, and
9 that's exactly what the corrected figure depicts.

10 Q. So, in your view, Dr. Caloyannides, is it appropriate to
11 refer to the corrected drawing?

12 A. I think that's the only drawing one should refer to.

13 Q. So, on the screen, it appears that we have the corrected
14 Figure 4 from your slides. And if you could, briefly walk us
15 through how the corrected Figure 4 flows.

16 A. Sure.

17 Again, this represents the pictorial logical flow
18 depiction of what is actually happening in the software in
19 the phone.

20 And the first step is to peek into the buffers and see,
21 is there data in them. And that is the Step 410.

22 The next step, in Box 420, is to determine, is data in
23 at least one of the buffers; and if so, there's Box 430, how
24 many of them, is it in multiple buffers, or in just one
25 buffer, and different courses of action are pursued in the

1 remaining flow diagram depending on the outcome of the
2 decision.

3 In particular, if there is data not in multiple buffers,
4 that means it's only in one buffer. Then that means
5 designate -- select in plain English -- the short format.
6 That is what is shown by Box 450.

7 If there's data in multiple buffers, the yellow -- the
8 green arrows in the circles is yes, then a check is made to
9 see, is there capacity for a long format.

10 Obviously, if I'm coming out of 430, we want a long
11 format and can we do it.

12 And then after that, if it said, yes, there is capacity,
13 well, then designate the long format. If there isn't, well,
14 then decide what to do. And what to do next is you're stuck
15 now with a short format.

16 And the question is: Well, given that you have to send
17 a lot of stuff there, what do you put in the short format and
18 what do you leave out?

19 And the wise decision was made what to put in there is
20 what has the highest priority, and what you don't put in the
21 there, which, of course, does not have the highest priority.

22 So we designate the short format with the highest
23 priority data and off you go.

24 Q. Thank you, Dr. Caloyannides.

25 MR. NELSON: Your Honor, at this point, we're going

1 to need to seal the courtroom.

2 THE COURT: All right. Ladies and Gentlemen, if
3 you are not covered by the protective order, I'm going to
4 need you to leave the courtroom at this time. We will let
5 you know when you may reenter.

6 (Courtroom sealed.)

7 (This portion of the transcript is sealed and filed
8 under separate cover as Sealed Portion No. 5.)

9 (Courtroom unsealed.)

10 MR. NELSON: And, Your Honor, briefly, there were a
11 series of eight exhibits that the parties agreed would be
12 preadmitted that Dr. Caloyannides testified to on his direct.

13 They are Plaintiff's Exhibits 133, 151, 141, 20,
14 116, 95, and 103. And I would move those into evidence.

15 THE COURT: Any objection?

16 MR. LUMISH: No objections, your Honor.

17 THE COURT: They will be admitted.

18 All right. Cross-examination?

19 MR. LUMISH: Thank you, your Honor.

20 CROSS-EXAMINATION

21 BY MR. LUMISH:

22 Q. Good morning, Dr. Caloyannides.

23 A. Good morning, sir.

24 Q. We've met before, sir, right?

25 A. We have indeed.

1 Q. It's good to see you again.

2 I want to just start by talking about what infringement
3 means to you. And I can't remember who said it. One of the
4 lawyers from CCE, at some point in the trial, described
5 patents and claims as a recipe.

6 Were you here for that? They talked about the secret
7 recipe for Coca-Cola?

8 A. Yes. I remember that, yes.

9 Q. Okay. I thought that was a pretty apt description. And
10 so, if you think of a recipe or claims as infringement, do
11 you agree that to infringe a claim, Apple, in this instance,
12 would have to practice every single limitation in the claim?
13 Right?

14 A. That is correct.

15 Q. Every claim element would have to be practiced exactly;
16 isn't that true, sir?

17 A. For a method claim, that is correct.

18 Q. And so, if you think of the recipe for Coca-Cola, if you
19 changed an ingredient -- so, for example, you changed sugar
20 to brown sugar -- might still be brown; might still be
21 bubbly; might still be sweet; but it wouldn't be Coca-Cola
22 anymore, would it?

23 A. Well, again, I'm not familiar with the Coca-Cola recipe.
24 I agree with your first premise, that you have to meet all of
25 the limitations of the claims.

1 Q. It's the claims that matter, right?

2 A. As far as infringement is concerned, I'm not an
3 attorney, but that is my understanding.

4 Q. If you change sugar to molasses, that would be a
5 different recipe, wouldn't it?

6 A. Well, again, I'm not a chemist or a Coke expert, but I
7 would imagine so.

8 Q. And in this case, in light of your opinions, it's not
9 good enough to just get close, right? You can't say it's an
10 equivalent but different. You have to establish, and it's
11 CCE's burden of proving, that every requirement of the
12 claims, every part of that recipe is met literally. Isn't
13 that true?

14 A. Well, again, I'm not an attorney, but that's my
15 understanding.

16 Q. Okay. Now, you spent a lot of time in your presentation
17 this morning talking about the standard and showing that
18 Apple complies with the standard.

19 Do you recall that generally?

20 A. I do.

21 Q. But as you noted, that's not really in dispute, right?
22 Apple agrees that for that one part of the LTE standard,
23 Section 5.4.5, that it complies with the standard.

24 A. I don't remember the exact number for the standard, but
25 I remember that Apple agreed that it complies with some

1 portions of the standard, yes.

2 Q. You can't establish infringement based on comparing the
3 claims to the standard, though, right? You have to compare
4 the claims to the accused products here.

5 A. Well, yes. I'm complaining -- comparing -- I'm sorry --
6 the claims to the accused products, and I only referenced the
7 standard in showing that the claims are infringed upon.

8 Q. The patent claims here -- were you here when Mr. Sebire
9 testified yesterday?

10 A. I was.

11 Q. And he testified that the claims were written by
12 lawyers, right?

13 A. I believe he said something to that effect.

14 Q. And he wasn't sure if those lawyers were LTE experts,
15 right?

16 A. I believe he said so.

17 Q. And so it could be, right, that the claims don't
18 actually cover the LTE standard.

19 A. Again, I was not asked to opine on whether the claims do
20 or do not cover the standard, only whether the claims are
21 infringed upon by the accused products.

22 Q. Right. So you haven't told our jury and haven't opined
23 in this case that the claims of the '820 patent cover the
24 words of the standard, true?

25 A. Again, I have not compared the claims to the standard.

1 Neither was I was asked to.

2 Q. Now, you understand that the arguments between the
3 parties, the disagreements between us, really relate to the
4 source code and what the source code does and whether the
5 source code that Qualcomm provides on the Qualcomm chip
6 practices every one of those claims -- I'm sorry -- every one
7 of those requirements of the claims that you've said are
8 infringed, right?

9 A. Well, I wouldn't limit it to that. I mean, the claims
10 cover a wide assortment of aspects, and source code comes
11 into play with some of them.

12 Q. I'm asking you about the disagreements between the
13 parties. You understand that where Apple disagrees with
14 CCE's accusation in this case are really down in what the
15 source code does and what it doesn't do, right?

16 A. Well, again, I have not narrowed it down to that level,
17 but there are some differences, which are as to what the
18 source code does or does not do. I'm not sure that that's
19 all the differences that we have.

20 Q. Okay. You agree at least with me, I hope, that Apple
21 thinks that the source code shows that it doesn't infringe
22 the '820 patent. I know you're not going to agree that we're
23 right, but you agree that that's the position that we've
24 advanced and the reason we're here defending ourselves?

25 A. That is correct.

1 Again, I remind you I'm not a source coding expert.

2 They had the source coding expert yesterday and plenty of
3 opportunities to question him on source code matters.

4 Q. And the source code -- well, that's kind of like the
5 recipe for what the Qualcomm chip does, isn't it?

6 A. Source code is the recipe for what the chip does, yes.

7 Q. We're comparing recipes. We're comparing the recipe in
8 the claims of the '820 patent to the recipe of the source
9 code of the Qualcomm chip, fair?

10 A. Yeah, to some extent. That's an oversimplification, but
11 I think that's somewhat correct, yes.

12 Q. And the only way to know what the Qualcomm chip is
13 programmed to do is to look at that code, isn't it?

14 A. Well, that is one way of looking at what the Qualcomm
15 chip does. However, we didn't show that the -- show that the
16 code itself is identical to the flowchart and showed why it's
17 identical to the flowchart.

18 So whether I apply something to the code or the
19 flowchart, to me, that's equivalent.

20 MR. LUMISH: Your Honor, it probably makes sense
21 and I'd ask the Court to seal the court at this point to
22 comply with the Qualcomm protective order issues.

23 THE COURT: Okay. We're going to seal the
24 courtroom at this time. Please exit if you're not under the
25 protective order.

1 || (Courtroom sealed.)

(This portion of the transcript is sealed and filed
under separate cover as Sealed Portion No. 6.)

4 || (Courtroom unsealed.)

5 MR. LUMISH: Okay. Starting again, Your Honor.

6 Q. (By Mr. Lumish) So going back to your expertise in
7 standards, you're not a member and you're not affiliated with
8 the 3GPP, right?

9 A. That is correct.

10 Q. You didn't participate in any way with the 3GPP?

11 A. That is correct.

12 Q. You're not a member or affiliated with ETSI, the
13 European Standards Institute, that is the one that publishes
14 the LTE standard, right?

15 A. Correct.

16 Q. You're not a member or in any way affiliated with any
17 cellular standards organization?

18 A. That is correct.

19 Q. Even in your technical work, you've never designed any
20 buffer status report triggers or selection criteria, have
21 you?

22 A. Well, that is not correct actually. Even though the
23 name "buffer status reports" is usually understood to be in
24 connection with 4G and, perhaps, with much lesser extent to
25 some 3G, the notion of handshaking between the sending end

1 and the receiving end or the sending and the request
2 resources to be provided for sending data, I've been
3 affiliated with and designed systems that do that for many
4 decades. If it were a lined word -- world and also in the
5 wireless world, it was not called BSR but it was functionally
6 the same.

7 Q. So your testimony today is you have designed buffer
8 status report triggers?

9 A. I believe I answered. I have not designed what is --
10 you call BSR triggers, but I have designed things which are
11 functionally performing a comparable function.

12 Q. Okay. So my question is simple. You've never designed
13 any buffer status report triggers; is that true or false?

14 A. Well, if you would leave the term "buffer status
15 triggers" to what is done in 4G cellular, that is correct.

16 Q. Okay. And you haven't developed any buffer status
17 report triggers, right?

18 A. Again, in the context of 4G cellular, it is correct.

19 Q. When you say 4G cellular, that's LTE, right?

20 A. That is LTE.

21 Q. Okay. And you haven't programmed any code to implement
22 buffer status report triggers, have you?

23 A. No. I do not program.

24 Q. You didn't talk to Mr. Sebire in preparing your reports
25 about the LTE standard or buffer status report triggers or

1 selection criteria, right?

2 A. No. I have not talked to Mr. Sebire until I saw him a
3 couple of days ago here.

4 Q. You never spoke with Mr. Sebire in learning about the
5 case and trying to prepare yourself to form the opinions that
6 you've testified about today?

7 A. No. I have not talked to Mr. Sebire before yesterday.

8 Q. You never emailed or communicated with him either,
9 before your deposition at least, right?

10 A. That is correct.

11 Q. Let's turn to Qualcomm.

12 You understand that Qualcomm here provides the chips and
13 the functionality that's been accused of infringement?

14 A. That is correct.

15 Q. All of the functionality, in fact, that you testified
16 today and said infringes the '820 patent comes from or is
17 performed by what's called a baseband chip that Apple buys
18 from Qualcomm, right?

19 A. That's correct.

20 Q. But you didn't -- well, you don't know exactly what the
21 baseband chip for Qualcomm does or does not do in any depth,
22 do you?

23 A. Well, it depends what you mean in any depth. Not in
24 sufficient depth for the purposes of my opinions that were
25 formed and presented in my report and in my testimony. And

1 at that level of depth I know as to what it does, and that's
2 further attested to not only by my own -- by my own review of
3 Qualcomm chips but also by the testimony of Qualcomm and
4 Apple employees.

5 Q. Well, you don't know if the Qualcomm baseband chip
6 incorporates LTE downlink technology, do you?

7 A. No. I only concentrate on the portions that pertain to
8 the infringement of this case.

9 Q. I'm sorry. Was that a no? I didn't hear the beginning.
10 You -- let me ask it again because I'm not sure what the
11 testimony is. I apologize.

12 You don't know if the Qualcomm baseband chip performs
13 LTE downlink technology. Is that true or false?

14 A. I was only concerned about the uplink portion of the
15 technology that the LT -- that the Qualcomm chip performs.

16 Q. And you don't know if it's possible for the Qualcomm
17 chip to send buffer status reports in a non-infringing
18 manner, right?

19 A. Well, like I said, I only concentrated on the portions
20 of the Qualcomm chip that appeared to be confirming
21 infringement.

22 Q. I'm sorry, sir. Again, I have to repeat myself again.
23 I would appreciate it if you'll answer my questions. You'll
24 have a chance, you understand, to come back and testify on
25 redirect examination and -- and say whatever you think you

1 would like to say. Do you understand that?

2 A. Yeah. I'm trying to be helpful by giving you precise
3 answers as opposed to yeses or noes.

4 Q. I appreciate that. So, if you -- if you could answer
5 the questions I'm asking, I'd very much appreciate it.

6 You don't know if the Qualcomm -- withdraw, I'll start
7 again.

8 You don't know if it's possible for the Qualcomm chip to
9 send buffer status reports in a non-infringing way; isn't
10 that right?

11 A. I don't know what the Qualcomm chip can do other than
12 what I discussed.

13 Q. Right. You have no way of knowing any capabilities of
14 the Qualcomm chip if they're not written down in your report,
15 right?

16 A. That is correct.

17 Q. You do know that the Qualcomm chip performs a lot of
18 other functions, though, right?

19 A. That's my understanding.

20 Q. But you don't know what else the Qualcomm chip is
21 capable of doing other than specifically LTE buffer status
22 report reporting, right?

23 A. That is correct.

24 Q. When we talked before, you couldn't name any other
25 functionality of the Qualcomm chip?

1 A. Yeah, I'm not surprised. Yes.

2 Q. You don't know if the chip provides GPS functionality,
3 for example?

4 A. I don't know. I would imagine it does, but I do not --
5 I have not looked into that.

6 Q. And you don't know if the Qualcomm chip can provide 3G
7 cellular communications, right?

8 A. Well, I don't know formally. I know from using my own
9 cell phone, which has a Qualcomm chip, in a 3G environment
10 and it worked. So from that I infer that the Qualcomm chip
11 does support 3G functionality as well.

12 Q. And you'll agree with me that the 3G cellular
13 functionality doesn't infringe the claims of the '820 patent,
14 right?

15 A. That's my understanding.

16 Q. You didn't speak with any Qualcomm employees or
17 engineers about the Qualcomm chip that's accused of
18 infringing in this case, did you?

19 A. No, I did not.

20 Q. You didn't speak with any Qualcomm engineers in any way
21 related to the lawsuit; is that true, sir?

22 A. That's also true.

23 Q. Now, you talked about testing earlier. And I'll put up
24 another slide, if I may.

25 This was a slide that you presented to the jury this

1 morning; is that right, sir?

2 A. Yes, that is correct.

3 Q. And to form your opinions of infringement in this case,
4 you relied on the testing that these results are reflecting;
5 is that right?

6 A. Yes. I relied partially on that, yes.

7 Q. But you received this chart -- the one that's on the
8 screen, you got that from CCE's lawyer, right? It was a
9 single sheet of paper provided to you?

10 A. That is correct. I don't remember CCE's lawyers or
11 whether it was provided through them. I really don't
12 remember how I got, but it was either through CCE or from the
13 gentleman that did the tests. I forget now which one.

14 Q. And which gentleman who did the tests do you mean?

15 A. I believe Mr. Claude Royer is his name.

16 Q. Now, you'll agree with me the chart that you showed the
17 jury, on the right-hand side here -- maybe I can zoom in a
18 little better -- refers to long and short buffer status
19 report count, right?

20 A. That is correct.

21 Q. It doesn't mention truncated at all, does it?

22 A. No, it does not. My understanding is that truncated is
23 a variant of short BSRs.

24 Q. I'll come back to that one in a moment.

25 You -- for this testing that you talked about, you

1 personally didn't conduct any tests to reach your conclusions
2 that the Qualcomm chip and Apple somehow infringed the '820
3 patent, did you?

4 A. I did not conduct any tests personally. That's correct.

5 Q. All of the testing that you relied on, that was all done
6 by somebody else, right?

7 A. That is correct.

8 Q. And before you issued your reports in this case, you
9 spoke to those people who did the testing once or twice for
10 about half an hour, right?

11 A. Approximately, yes.

12 Q. You don't know who the testers were. At least you
13 didn't when we met before after you submitted your reports in
14 this case, right?

15 A. Well, I could not recall their names, if that's what you
16 mean.

17 Q. You didn't know where they worked, right?

18 A. I still don't.

19 Q. You still don't. Is that what you said?

20 A. Not exactly where they work.

21 Q. You didn't know what procedures or equipment these
22 testers used for the tests that created this chart that you
23 presented to the jury today, right?

24 A. No, that's not true. During the telephone conversation
25 that I had with them, I recall that they described to me

1 exactly what test equipment they used and what procedures
2 they used. I did not feel that this was important in the
3 context of the chart here to spell out in the report. I may
4 have done it, though. I don't remember.

5 Q. Can you turn in your deposition, please, to Page 400?
6 Beginning at Line 25 and going through 401, Page [sic] 10 is
7 what I'm going to refer to. I'll ask my question again after
8 you've had a chance to read it, though, sir.

9 A. Yes.

10 Q. Do you agree with me now that when you and I met -- I
11 think it was in June -- or when you were deposed, I should
12 say. I don't think this was me -- in June of this year you
13 didn't recall what the procedures or equipment were that were
14 used for the testing that led to the chart that you presented
15 to the jury today?

16 A. Oh, yeah. I've not memorized it by heart. That's
17 correct.

18 Q. You didn't know what model of networking equipment the
19 testers used for the testing, did you?

20 A. No. I did not retain that to memory, no.

21 Q. You didn't know what applications were running on the
22 cell phones that were tested, did you?

23 A. No. Again, they told me what they were doing, and I did
24 not feel that that was something I should commit to memory.

25 Q. So this is another slide that you presented this

1 morning. Do I have that right, sir?

2 A. Yes.

3 Q. And this was a slide you put up to explain to the jury
4 that you thought the monitoring step of the claims was
5 practiced by the Qualcomm chip and software, right?

6 A. That's correct.

7 Q. This is the -- the monitoring, that's the first element
8 of the claims, isn't it?

9 A. It is.

10 Q. Now, I noticed that you didn't actually put the claim
11 language up; you put a figure up, right?

12 A. In this case, that is correct.

13 Q. And you know you can't say somebody infringes because
14 they do what's in a figure, right?

15 A. Well, that is not the only claim. That slide is titled
16 "Corrected Figure 4," and it's only meant to show corrected
17 Figure 4. The analysis about infringement -- because later
18 on is where it shows a functional equivalent between the
19 flowchart and the source code.

20 Q. So if you could answer my question, though, please. You
21 know that you can't reach a conclusion that somebody
22 infringes because you believe they practice a figure, right?

23 A. I believe so, yes.

24 Q. They have to practice the claim.

25 A. Yes.

1 Q. Okay. And, in fact, for the monitoring step, you have
2 no idea about how the Qualcomm chip allegedly monitors
3 buffers, do you?

4 A. No, that is not true, actually. I showed the actual
5 portion of the Qualcomm chip software both in the prep build
6 BSR and the build BSR where this monitoring step is
7 performed.

8 Q. So if you would turn to your deposition, please, and
9 starting at Page 819, and let me know when you have that,
10 please.

11 Do you have 819 in front of you?

12 A. Yes, I do.

13 Q. I'd like to read from Lines 3 through 16.

14 A. Yes.

15 Q. I asked you the question: When you talk about the
16 devices monitor the uplink data buffers, they're monitoring
17 individual buffers, not LCGs or radio bearer groups, right?

18 You answered: They monitor individual buffers, that is
19 correct.

20 And I asked you: And how? Tell me precisely how
21 they're monitoring those individual buffers.

22 And you answered: They just check to see if they have
23 transitioned from non-zero data to -- I'm sorry -- from zero
24 data to non-zero data, for example.

25 And I asked you: How? How are they detecting that?

1 You answered: You're asking about the innards of the
2 chip. I have no idea.

3 Right?

4 A. Yes. And I continue on to say, I'm not a chip
5 manufacturer. Yes, that's correct.

6 Q. You don't know the specific details about how the
7 Qualcomm chip monitors the buffers, according to your
8 opinion, right?

9 A. Well, in terms of the innards of the hardware, the
10 electronics, the transistors, the resistors, or whatever
11 else, that is correct.

12 Q. So, my question is: You don't know the specific details
13 of how the Qualcomm chips monitor those buffers, do you?

14 A. No, that's not correct. I know how the software code
15 performs that function. But you asked me exactly how they do
16 it; and that, to me, implied hardware.

17 So I don't know -- don't have a microphotograph of the
18 hardware to see just exactly what transistors and resistors
19 and whatnot they used to do that.

20 Q. Let's look at your deposition again, please, on Page
21 822.

22 Do you have that page in front of you?

23 A. I do.

24 Q. So beginning at Line 5, I asked you: You're telling me
25 they do that.

1 Do you understand that here we're talking about the
2 monitoring buffers?

3 A. Right.

4 Q. And I said: You're telling me they do that. I'm asking
5 you, how they do that.

6 And your answer was: I don't know the specific details
7 of how they do it. The patent here does not say doing it
8 this way or that way, just doing it any way. As long as you
9 monitor the use of a buffer, and the Qualcomm chips do that,
10 then it is infringing the element of the claim no matter how
11 they do it.

12 That was your testimony, wasn't it, sir, under oath?

13 A. It is. Again, I think we have it -- what you're
14 pointing out here is a communications gap. When you say how,
15 I interpret that to mean how in terms of transistors,
16 resistors, hardware, because you're talking about a chip.

17 I do know how they do it in terms of the software, but
18 in terms of the hardware, again, I have no idea.

19 MR. LUMISH: May I please have Slide 59 from
20 Dr. Caloyannides' presentation?

21 Our numbering is not matching up. Looks like this
22 is actually 58 in what was presented.

23 Q. (By Mr. Lumish) Do you recognize this slide as one you
24 showed to the jury, sir?

25 A. I do.

1 Q. And you showed this as part of your evidence for
2 monitoring, didn't you?

3 A. That was part of the evidence, indeed.

4 Q. Now, the monitoring of the claims of the '820 patent,
5 that's supposed to be done to -- as part of the process for
6 designating long or short buffer status reports, isn't it?

7 A. Well, the standards I pointed out in my testimony is
8 done in two places; but it's, indeed, part of the process of
9 determining whether you designate a short or a long BSR, yes.

10 Q. I'm not sure we're connecting. I'm asking you about the
11 claims now. So about what the patent requires in the recipe
12 in those claims.

13 The claims require the monitoring to be part of that
14 process for designating long and short form buffer status
15 reports, or do you disagree with that?

16 A. I agree with that.

17 Q. Okay. But yet the chart that you showed here on
18 Slide 58, this actually all occurs after the designation has
19 already happened; isn't that right?

20 A. No, no, no, no, no. You know, the uplink task in the
21 case of the padding BSR is distinct from the regular and
22 periodic BSR. The monitoring is happening when one counts
23 the number of zero LCGs. Unfortunately, they don't count
24 something unless you want to do it first.

25 So you peek in the buffers to see if there data, buffer

1 groups in this case; and if there is, then you count them.

2 That's where the monitoring in this case is done.

3 Q. It's hard to see it, but you have two diamonds that you
4 didn't color in. You colored in the things around them. One
5 says: BSR size equals long. The other says: BSR size
6 equals short, question mark.

7 You understand that those diamonds are actually checking
8 whether the BSRs, the buffer status reports, have already
9 been designated as long or short?

10 A. You're asking a different question. You asked me before
11 the question, where is the monitoring done, and I pointed to
12 the standard in maroon-colored rectangle.

13 Now you asked a different question. What is the
14 different question?

15 Q. Can you answer my question, please?

16 The diamonds --

17 MR. LUMISH: Can you bring this back up in larger
18 form, please?

19 Thank you.

20 Q. (By Mr. Lumish) It says: BSR size equals long, question
21 mark, right?

22 A. Yes.

23 Q. And the other says: BSR size equals short, question
24 mark, right?

25 A. Yes.

1 Q. These diamonds aren't designating short or long; they're
2 checking whether the buffer status report has previously been
3 designated as long or short, aren't they?

4 A. I can't see the figure. It's obscured by what you just
5 magnified here.

6 Q. Sure. I had to make it bigger. It's hard to see, at
7 least for me. What part would you like --

8 A. No, no. That's fine.

9 As I pointed out in my testimony, what's happened is,
10 before we get to the -- in the case of the patent, BSR, the
11 first one looks at the available space; and if there's enough
12 space to accommodate a long BSR, then a long BSR is
13 generated. And that is what is shown in the first rectangle
14 here.

15 If the space is not enough for a long BSR, then we go
16 through this ratio of trying to see what kind of a short BSR
17 do we send.

18 Q. Okay. So do you disagree, then, that the maroon
19 monitoring step that you highlighted comes after there's
20 already been a designation of the buffer status report as
21 long or short?

22 A. Well, I'll agree that in the case of the padding BSR,
23 the number of LCGs and the designation of short -- truncated
24 short is done after the long BSR option has been eliminated
25 from consideration, yes.

1 Q. Okay. You're talking about padding BSRs. You wrote
2 that on your slide, didn't you?

3 A. I am.

4 Q. And I'm asking you about the maroon box at the top that
5 you say performs the monitoring step of the claims.

6 A. Yes.

7 Q. Are you with me there?

8 A. Yes.

9 Q. You agree with me, don't you, that that monitoring step
10 comes after the check has been done to determine whether the
11 buffer status report should be long or short?

12 A. Well, that would appear from the chart. However, as I
13 indicated, the determination for long BSR is done even before
14 all of that if there is sufficient uplink bandwidth for a
15 long BSR. One does not even get into this flowchart here if
16 there's enough room for a long BSR.

17 Q. Let's go to another one of your slides here, please.

18 This was -- at least according to the numbered copy I
19 have -- Slide 52.

20 It says: Apple source code regular/periodic BSR.

21 A. Yes.

22 Q. And you -- you show -- and this is your effort to show
23 multiple pre-selected conditions. Do I have that right?

24 A. Well, that's showing the uplink task in the build BSR
25 and the designation function, yes.

1 Q. And you break out truncated BSRs and short BSRs. Do you
2 see that?

3 A. I do.

4 Q. Are you trying to suggest to the jury that those are
5 different buffer status report formats?

6 A. No. The difference is what is shown in the title. And
7 this one is for regular and periodic BSR. And the other one
8 is what happens in the case of a padding BSR, which is a
9 different logic.

10 Q. Okay. So you'll agree with me, then, I hope, that short
11 and truncated BSRs, that -- that's the same format. It's
12 just a name for what the contents and header are, not the
13 format, right?

14 A. The formats for short and truncated short are, indeed,
15 the same.

16 Q. They're the same. You can lump them together, can't
17 you?

18 A. Well, it depends what you mean by "lumping" them
19 together. But you can lump them as far as the shortness of
20 their BSRs, yes.

21 Q. The formats between what you call truncated and short
22 are indistinguishable, aren't they?

23 A. They are indistinguishable, yes, the formats, not the
24 contents.

25 Q. Now, to decide whether to send a long format buffer

1 status report -- I'm on padding buffer status reports,
2 though, you understand that, sir?

3 A. Okay. But you're showing me now the chart for
4 regular/periodic.

5 Q. You're right. So I'll take the chart down so there's no
6 confusion.

7 Let me ask you about padding BSRs again. To decide
8 whether to send a long format padding buffer status report or
9 a short format, the only thing the source code checks is
10 whether there is sufficient space, right?

11 A. That is correct.

12 Q. It doesn't say how many buffers have data. Does it look
13 for that in order to designate short or long?

14 A. No. But then once it -- I'm sorry. It has to figure
15 out what kind of a short and that's where that code gets into
16 the picture.

17 Q. Right. What kind of a short, meaning do I use a
18 truncated short or a non-truncated short?

19 A. Exactly.

20 Q. But the same format, right? It's not changing format
21 with that question.

22 A. Well, it's the same format as far as outside appearance
23 is concerned. As far as the contents, they're different.

24 Q. Of course. But the format is indistinguishable?

25 A. To an outside observer, yes.

1 MR. LUMISH: Can we have Claim 1, please, from the
2 patent, Plaintiff's Exhibit 1?

3 Q. (By Mr. Lumish) I want to ask you about pre-selected
4 conditions, if I can, sir.

5 So there's a few requirements in this claim as they
6 relate to pre-selected conditions. Do you agree with me
7 there?

8 A. I'm sorry. I missed a word. Is a what requirement?

9 Q. I'll walk you through them. Why don't we start -- if
10 you see the second limitation, it says: Detecting one of a
11 plurality of pre-selected conditions.

12 A. I see that.

13 Q. One of the things that you have to show to find
14 infringement by the Qualcomm chip is that there is a
15 plurality of pre-selected conditions, right?

16 A. That is correct.

17 Q. And plurality means two or more, right?

18 A. Well, it means more than one.

19 Q. More than one.

20 A. That can be 17.

21 Q. And these pre-selected conditions, they're used, you can
22 see, in the next limitation to designate a buffer status
23 reporting format, right?

24 A. That is correct.

25 MR. LUMISH: If you can highlight "designating" for

1 me, please, the word "designating" and then "buffer status
2 reporting format" down -- actually -- that works.

3 Thank you.

4 Q. (By Mr. Lumish) And these pre-selected conditions, they
5 have to correspond to the plurality of buffers. Do you see
6 that in the requirement above, the detecting limitation?

7 A. That is correct.

8 Q. So there's three requirements. Can we agree on that?
9 There's got to be two or more pre-selected conditions. They
10 have to be used to designate long or short formats. And they
11 have to correspond to the buffers?

12 A. They have to correspond to the number of buffers with
13 non-zero data in them. That's correct.

14 Q. They have to correspond to the plurality of buffers is
15 what the claim says.

16 A. Well, they have to correspond to the conditions that
17 correspond to the plurality of the buffers. Yes.

18 Q. I'm asking you about the claim language.

19 MR. LUMISH: So, Chris, if you could highlight,
20 please -- or maybe pull down the highlighting and just help
21 me with corresponding to the plurality of buffers in the
22 detecting requirement.

23 Thank you.

24 Q. (By Mr. Lumish) So, I'm asking you about this language,
25 Dr. Caloyannides. The pre-selected conditions have to

1 correspond to the buffers, don't they?

2 A. That is correct.

3 Q. You talked on direct -- I'll try to do this in a way
4 where we don't need to seal the courtroom. But you talked in
5 your direct examination about some source code that checks to
6 see whether there are zero buffers that have data. Do you
7 remember that?

8 A. I do.

9 Q. But that zero check to see if there is none, that's just
10 to decide whether you send any buffer status report of any
11 kind, isn't it?

12 A. You cannot disassociate the check to see if there is
13 zero, one, or two. It's a single check. It consists of a
14 number of "if" statements. Is it more than zero, is it more
15 than one. So it's all part of the same package.

16 Q. Were you here when Dr. Jones -- or Mr. Jones testified
17 yesterday?

18 A. I was.

19 Q. Did you hear him testify that if there are no buffers
20 with data, you skip everything after that and you go to the
21 end in the source code?

22 A. I believe he said so, yes.

23 Q. Right. And that's -- that shows you, doesn't it, that
24 if there are no buffers with data, you don't choose long or
25 short. You don't send a buffer status report at all.

1 A. Well, of course. If there's nothing to send, you don't
2 send anything. Yes.

3 Q. If there are zero buffers with data, you don't send a
4 buffer status report because there's nothing to send, right?
5 It's pretty straightforward.

6 A. Most of the time, yes.

7 MR. LUMISH: May I please have, from the '820
8 patent specification, Column 60 -- Column 7, Line 60. Sorry.

9 And then if you could just bring it to the end of
10 that column, please.

11 Thank you.

12 Q. (By Mr. Lumish) You've read this part of the '820 patent
13 before, haven't you, Doctor?

14 A. I did. Let me refresh my memory, if I may.

15 Q. While you're doing that, I want to ask you about the
16 second sentence that says "in some embodiments" -- really,
17 all of that sentence.

18 A. Okay.

19 Q. Have you read this part of the patent before?

20 A. Yes, I have.

21 Q. And this is describing a pre-selected condition, right?

22 A. It is describing the detection of the pre-selected
23 condition as to what it may look, yes.

24 Q. And it's "pre-selected condition" in the singular. This
25 is one of the plurality. This would be one example of the

1 more than one that you would need to find in the -- to find
2 practicing of the claims, right?

3 A. No. Even though -- again, I'm not a semanticist or a
4 linguist, but it says the condition may include detecting one
5 or more communication buffers. These are two conditions.
6 One is one condition. More communication buffers is another
7 condition.

8 Q. Well, the patent says "condition" in the singular.
9 You'll at least agree with me there, won't you?

10 A. It says -- yes, I pointed out I'm not a linguist or a
11 semanticist, but it is clear they're talking about two
12 conditions. And, in fact, the entire patent makes a big
13 tadoo about the fact we're -- we're doing one -- one thing if
14 there's one buffer of data or different thing if there's more
15 than one buffers of data.

16 Q. Can you answer my question, please? The language of the
17 patent -- I understand how you would like to interpret it.
18 But the language of the patent, the words that it uses, says
19 "pre-selected condition" in the singular. There is no "S" on
20 the end of "condition" is there?

21 A. In this case there is no "S."

22 Q. You would put an "S" on the end, though. You think it
23 should mean "conditions," plural. Is that what I just heard
24 you testify to?

25 A. Well, it's evident from the fact it's talking about two

conditions. It says one or more communication buffers.

2 | That's two conditions.

3 Q. Okay. Now --

4 MR. LUMISH: We can take that down.

5 || Thank you.

6 Q. (By Mr. Lumish) I'm sorry, Doctor.

7 A. That's fine.

8 Q. Let me -- let me talk to you about the specification,
9 again, if I might, sir.

10 You agree with me the LTE specification is really big,
11 right? If you were to try to print it, it would go up to the
12 ceiling.

13 A. It is voluminous, yes.

14 Q. You -- you have no reason to disagree that it's maybe as
15 many as 20,000 pages or more, do you?

16 A. I would not be surprised, no.

17 Q. This was a slide you showed the jury, wasn't it?

18 A. Yes, it was.

19 Q. And this is part of the LTE specification, isn't it?

20 A. Yes, it is.

21 Q. Section 5.4.5, the one I mentioned earlier in our
22 discussion this morning?

23 A. Well, it's the 3GPP spec for the 36.321, yes.

24 Q. You can see in the upper left corner, though, Section
25 5.4.5?

1 A. Yes.

2 Q. This is the part of the standard you were telling our
3 jury that sets forth the selection of long and short that CCE
4 claims is covered by their patent, right?

5 A. I believe so, yes.

6 Q. It's the sum total of it, isn't it?

7 A. Well, that's part of it.

8 Q. Is it --

9 A. I mean, that's the part of the spec. I have not
10 committed to memory the entire 36.321, which, as you pointed
11 out, goes for hundreds of thousands of pages; but this one
12 seems to refer to regular/periodic and padded BSRs, yes.

13 Q. My point is that the hundreds of thousands of pages, as
14 you just said, this is the sum total of the part that matters
15 for this case; isn't that right?

16 A. Oh, my God. I cannot recall from memory whether there's
17 any reference of the same subject in some of the other
18 hundreds of thousands of pages.

19 Q. You agree that the LTE standard has vast numbers of
20 technical specifications in it?

21 A. The LTE standard does have, indeed, a vast number of
22 technical specifications in it, that's correct.

23 Q. And when you and I spoke before, you compared the LTE
24 system to a space shuttle, didn't you?

25 A. Well, but in a different context. I was trying to show

1 that LTE, as I said, is not a doorknob. It's a complex
2 conglomeration of a bunch of different disciplines and things
3 like that. Because of that, one has expertise in those
4 various different disciplines to address it competently.

5 Q. And compared to that, buffer status reporting, and in
6 particular, what we see on the screen here in the small
7 section that relates to selecting long or short, you would
8 refer to that as a very small slice of the overall pie,
9 wouldn't you?

10 A. Well, I mean, the importance of things does not
11 correspond to their physical size. This talks about
12 regular/periodic BSRs and padded BSRs. Is that thing
13 mentioned in the other hundreds of thousands of pages? May
14 well be. I have no idea.

15 Q. Can you answer my question, please?

16 A. Well, as I pointed out, this is a small -- what you're
17 showing me is a small piece. Now to tell you it is the only
18 piece? I don't know.

19 Q. It's a very small slice of the overall pie in your
20 words, isn't it?

21 A. This page is a small pie -- a small piece of the overall
22 pie. If there are other pages like it, I don't know.

23 Q. You own iPhones, don't you? You're an Apple customer?

24 A. That is correct.

25 Q. We appreciate that.

1 A. Thank you.

2 Q. I will thank you on behalf of my client.

3 You started buying iPhones within the last seven or
4 eight years, right?

5 A. Approximately, yes.

6 Q. And you'll agree with me that customers do not care and
7 do not know about choosing long and short form buffer status
8 reports, right?

9 A. Well, they don't care in terms of the terms you put it,
10 but they do care about the performance, which is very much
11 affected by the buffer status reports without the end
12 customers knowing about it.

13 Q. So you say that, but, in fact, you haven't done any
14 tests, and you haven't done any measurements to show that the
15 selection between long and short would have any major impact
16 on the efficiency of an LTE network; isn't that right?

17 A. Well, I have not done any tests myself. However, based
18 on my 50-plus years of experience in the field, I can, I
19 think, competently defend the proposition that using short
20 and long buffer status reports as opposed to
21 one-size-fits-all, does result in an improvement in the usage
22 of the spectrum, and hence, improvement in the performance of
23 the phones that use that.

24 MR. LUMISH: Your Honor, I object and move to
25 strike as nonresponsive.

1 THE COURT: I'll sustain the objection.

2 Q. (By Mr. Lumish) Can you answer my question, please,
3 Dr. Caloyannides?

4 You yourself have not done any tests or taken any
5 measurements to prove that using the selection between long
6 and short form buffer status reports instead of, for example,
7 just using long all of the time would have any major impact
8 on the efficiency of an LTE network?

9 A. I have not personally done any tests, if that's what
10 you're asking.

11 Q. Or taken any measurements?

12 A. Or I have not personally taken any measurements, yes.

13 Q. In fact, you wouldn't know how to measure how much more
14 efficient or cost effective any network or phone is or would
15 be because of the ability to choose long versus short buffer
16 status reporting, according to the LTE standard?

17 A. No, that's not right at all.

18 Q. Can you turn to Page 752 in your deposition, please,
19 sir?

20 Do you have that in front of you?

21 A. I do.

22 Q. I'd like to read from Lines 12 through 20, which I think
23 go directly to what I just asked you.

24 A. Give me just a minute.

25 Q. Please.

1 A. Yes.

2 Q. In your deposition in June, I asked you, quote:

3 Question: And you don't quantify in Paragraph 59 in any
4 way how much more efficient or cost effective any network or
5 phone is because of the long versus short BSR triggers
6 claimed in the '820 patent, do you?

7 There was an objection.

8 And you answered: If by quantify, you -- if you mean --
9 I don't know how you measure the performance.

10 That was your testimony, wasn't it, sir?

11 A. Yes, it was. And it's the short version of what would
12 have been a much longer explanatory answer, yes.

13 Q. Well, I'll show it to you on the screen, sir.

14 That's the -- I didn't drop anything from the question,
15 right?

16 A. No. I said I condensed my answer to a short answer for
17 you.

18 Q. Okay. But you agree I read the question and the answer
19 exactly as I asked it and exactly as you answered it?

20 A. That is what I said. If you let me explain, I will be
21 happy to.

22 Q. Well, I think I'll let you use CCE's lawyer's time for
23 that, if you don't mind.

24 Will you agree with me, sir, that the industry never
25 reacted to the '820 patent and said: Wow, this is a really

1 great and important invention?

2 A. Oh, that, I don't know.

3 Q. Will you agree with me that no awards were given to
4 Mr. Sebire or to Nokia for the achievements purportedly
5 provided by the '820 patent?

6 A. Again, I am not privy to any of that information.

7 Q. You agree with me that nobody's said in the industry or
8 otherwise that -- well, maybe outside of this lawsuit and
9 CCE -- that the claims or the inventions claimed in the '820
10 patent are important, revolutionary, ground-breaking, words
11 like that?

12 A. Again, I am not privy to any of that information.

13 Q. Will you agree with me that no one has ever said that
14 the reason LTE has been a successful network is because of
15 the things Mr. Sebire said to the jury this week that he
16 claimed as an invention in the '820 patent?

17 A. Again, I do not know that information.

18 Q. And will you agree with me that nobody has ever said
19 that the reason LTE has been successful is because of the
20 triggers or selection criteria for choosing between long and
21 short buffer status reports?

22 A. Same answer.

23 MR. LUMISH: Your Honor, I'll pass the witness.

24 THE COURT: All right. Redirect?

25 MR. NELSON: Just briefly, Your Honor.

1 REDIRECT EXAMINATION

2 BY MR. NELSON:

3 Q. Dr. Caloyannides, do you understand the '820 patent?

4 A. Yes, I do.

5 Q. Is it within your area of expertise?

6 A. Oh, yeah, definitely.

7 Q. Did you determine that before accepting the job?

8 A. I did.

9 Q. Who reviewed the code in this matter?

10 A. Mr. Jones.

11 Q. Did you hear Mr. Jones testify about the code yesterday?

12 A. I did.

13 Q. Does that also inform your opinions about infringement
14 today?

15 A. Very much so.

16 Q. Did you see anything yesterday during Mr. Jones'
17 testimony to make you question his conclusions?

18 A. No.

19 MR. NELSON: No further questions, Your Honor.

20 THE COURT: All right.

21 MR. LUMISH: Nothing further, Your Honor.

22 THE COURT: Okay. Dr. Caloyannides, you may step
23 down.

24 THE WITNESS: Thank you.

25 THE COURT: Who will be your next witness?

1 MR. CURRY: Your Honor, Plaintiff's next witness is
2 Mr. Green, Mr. Phil Green.

3 THE COURT: Mr. Curry, we'll go until about noon.

4 So, as we get closer, if you find a good stopping
5 point, just let me know.

6 Mr. Green, if you'll come forward and raise your
7 right hand to be sworn.

8 (Witness sworn.)

9 MR. HILL: Your Honor, can we get the binders?

10 PHILIP GREEN, PLAINTIFF'S WITNESS, SWORN

11 DIRECT EXAMINATION

12 BY MR. CURRY:

13 Q. Good morning.

14 A. Good morning.

15 Q. Please introduce yourself to the jury.

16 A. My name is Philip Green. I am 54 years old. I live in
17 Boston, Massachusetts; but I grew up in New Jersey. I have
18 two kids, a son 24 and a daughter who's 20.

19 Q. Mr. Green, did you prepare some slides to assist you
20 with your testimony today?

21 A. Yes, I did.

22 Q. All right. Let's take a look at one of your slides.

23 Where do you currently work?

24 A. I currently work for a firm called Hoffman Alvary &
25 Company, which is located in Newton, Massachusetts, which is

1 a suburb of Boston.

2 Q. And what does Hoffman Alvary do?

3 A. Hoffman Alvary is a consulting firm, but I specialize in
4 helping my clients and their counsel in understanding the
5 financial, accounting, valuation, and licensing-related
6 issues that have to do with intangibles such as intellectual
7 properties, patents, copyrights, trademarks, those sorts of
8 things.

9 Q. How long have you been at Hoffman Alvary?

10 A. I'm one of the founders of the firm. And I've been
11 there for the last 20 years.

12 Q. And what are you here to testify about today?

13 A. I'm here to testify about the damages that would be due
14 CCE in the event that the jury determines that the '820
15 patent is valid and infringed.

16 Q. Is this your first time serving as a damages expert in a
17 patent infringement case?

18 A. No, sir, it's not.

19 Q. About how many times have you done this?

20 A. I've testified at trial on patent damages at least 20
21 times. And I've written literally hundreds of other reports
22 on patent infringement damages throughout my career.

23 Q. How did you get into valuing intellectual property?

24 A. Well, the way I got into it, actually, sort of is at the
25 beginning of my resume in 1987 when I started working at

1 Ernst & Whinney. Ernst & Whinney was a big accounting firm,
2 and a lot of their clients at the time were clothing
3 manufacturers, so people who were making shirts and jeans and
4 whatever.

5 And we all know that when we buy a piece of clothing
6 often enough, it has a label on it and, you know, a alligator
7 or something like that. And it turns out that when you have
8 those labels, the clothing manufacturer actually has to pay a
9 royalty or something to somebody who owns that right. And so
10 that was part of my auditing.

11 And over the course of the last course of my career,
12 I've since then always been involved in things that have to
13 do with understanding payments for the use of intellectual
14 properties, their value, licensing them and so forth.

15 Q. Let's back up a little bit.

16 What sort of education did you receive that led you into
17 this field?

18 A. Well, I graduated from college with a degree in history.
19 I got that degree from Rutgers College -- or Rutgers
20 University. I then went on to get an MBA in accounting from
21 Rutgers Col -- from Rutgers University from the graduate
22 school of management.

23 Q. Why did you choose to go to Rutgers?

24 A. Well, I was actually very lucky. My father was a
25 professor there so I could go for free. And if you can get a

1 free education, you take it.

2 Q. Do you hold any professional certifications?

3 A. I do. I'm a licensed certified public accountant. I
4 have a license from the State of New York.

5 I'm also a certified management accountant, which means
6 I've taken a sequence of tests and some studies that have to
7 do with how companies report financial information
8 internally, so what the management looks at.

9 I also have two designations that relate to business and
10 intangible valuation. One from the AICPA. And the other
11 from a group called the American Society of Appraisers, which
12 is the ASA designation.

13 Q. What exactly is the ASA designation you just mentioned?

14 A. Well, the ASA designation is basically a designation
15 that connotes a specialty, at least in my case, in doing
16 business valuation. And it takes 10,000 hours of work that
17 you have to demonstrate to the American Society of Appraisers
18 that you've done in business valuation. And 10,000 hours
19 amounts to about five years of professional career. And then
20 you also have to submit to them -- at least when I did it --
21 two reports that they then peer review.

22 Q. What are some of the companies you've worked for either
23 as valuing intellectual property just generally or acting as
24 a damages expert?

25 A. Well, over the course of my career, it's been a wide

1 variety of companies and entities. Some are consumer
2 products companies like Johnson & Johnson. That does
3 Band-Aids and stuff -- I've worked on some of their products
4 over the years.

5 Keurig which makes those little cups that we say that
6 make coffee.

7 New Balance makes sneakers.

8 I've worked for a company over the years called Cooper
9 Cameron. Cooper Cameron makes things like undersea Christmas
10 trees that are used in making -- in drilling for oil. I've
11 worked on behalf of semiconductor manufacturers like Micron
12 and Motorola. And I've also worked for Harvard University
13 out of Boston.

14 Q. Harvard kind of seems odd-man out. What are they doing
15 up there?

16 A. So Harvard actually asked me to help them with licensing
17 some of the technology that had been developed by one of
18 their professors. The technology, actually, was a way to
19 make a semiconductor chip really cleanly and had very, very
20 small wires in it. And so they asked us to help out with
21 that.

22 Q. Now, have you actually negotiated a patent license
23 before?

24 A. Yes, sir, I have.

25 Q. Can you describe the patent license negotiation process?

1 A. Sure.

2 The patent license negotiation process sort of starts
3 off with the caution that all negotiations are different. I
4 mean, when it comes down to it patent license negotiations
5 are typically over different patents. And because a patent
6 is a unique thing when you get it out of the Patent Office,
7 it -- it generally is going to very much drive -- drive,
8 excuse me, what a license negotiation will do.

9 The parties are very important. The product in and of
10 itself is very important. And then ultimately in the end, a
11 patent license negotiation often results in a payment or some
12 other kinds of terms.

13 Q. I see there at the bottom you have royalty in
14 parentheses. What's a royalty?

15 A. A royalty is the payment that somebody gets to actually
16 use intellectual property. It's like rent.

17 Q. Well then, what's the difference between a license and a
18 royalty?

19 A. So license is an agreement that comes from a license
20 negotiation. It's the terms of what people agree to. If I
21 have a patent and others want to use it -- use it, I wind up
22 giving them a license, just like we have driver's licenses
23 that let us drive around on the streets. If we don't have a
24 license, we shouldn't be driving.

25 Same thing here. A patent gives the holder a particular

1 right. And when you have a patent license, you can use that
2 right. That's what usually happens. A royalty is typically
3 the payment for the use of that right.

4 Q. Now, in this case you have been retained by the
5 Plaintiff CCE, right?

6 A. Yes, sir.

7 Q. Have you ever been retained on behalf of a defendant?

8 A. Yes.

9 Q. And about how often are you retained by plaintiffs
10 versus defendants?

11 A. It's about 50/50 usually in -- in the way that my
12 practice works.

13 Q. And are you being compensated?

14 A. Yes. My firm Hoffman Alvary & Company is.

15 Q. At what rate?

16 A. My rate is \$550 an hour.

17 Q. How many hours have you put into this case?

18 A. Well, I probably have now, between preparing for the
19 trial and doing all of the work, close to 300 hours.

20 Q. And is your compensation dependent in any way on the
21 outcome of this case?

22 A. No, sir.

23 Q. Mr. Green, what were you asked to do when you were
24 retained?

25 A. I was asked to take a look at the documents, get an

1 understanding of the patented technology, do some of my own
2 research, and determine what a reasonable royalty would be
3 assuming that the '820 patent is found by you folks to be
4 valid and infringed.

5 Q. And can you give the jury a preview of what your
6 conclusion is in this case?

7 A. Sure.

8 I believe it was mentioned in the openings but my
9 conclusion is that a reasonable royalty for the use of the
10 '820 patent would be 15 cents per accused device. And
11 through March of 2016, that would result in total damages due
12 to CCE of \$27,647,770.

13 Q. And what evidence did you consider when evaluating
14 damages owed to CCE?

15 A. I considered a whole variety of evidence. I first off
16 looked at the patent, but I'm not a technical expert, so I
17 needed to -- but I needed to get an understanding of it from
18 my point of view of how licensing would normally work.

19 And then I also looked at documents that were part of
20 this case. There have been depositions. There have been
21 discovery. In other words, the documents that the parties
22 provided to one another.

23 I did some of my own research. I looked at financial
24 information. I looked at patent licenses of all sorts.

25 Q. All right. Can you give us an overview of the topics

1 that you're going to be discussing today?

2 A. Yes, sir. So I prepared this roadmap because there's a
3 whole bunch of different pieces that go into talking about
4 damages in a patent infringement case.

5 The first thing I'm going to do is talk a little bit
6 about the patented technology and the background. Not to
7 retread what Mr. Sebire, Dr. Caloyannides, or Mr. Jones has
8 done, but to put it in the context of what I would need to
9 do, the kind of analysis that I've done.

10 We're then going to talk a little bit about the rules
11 that are associated with actually determining a royalty in
12 this kind of a case. There's a lot of rules.

13 We're going to talk about the licenses, like I said, for
14 the '820 patent. Those are very important.

15 Some additional points that are important in
16 understanding the damages.

17 And then we're going to talk about the conclusion, how I
18 got there, and what the calculation of the damages is.

19 Q. About how long do you think it will take us to work
20 through all of this material?

21 A. I think it's going to take about an hour.

22 Q. So you mentioned the background of this case and
23 technology. For that, where did you start?

24 A. Well, I did what I normally do, which is I took a look
25 at the patent. Now, like I said, I'm not a technical expert

1 so I had conversations with Dr. Caloyannides, Mr. Jones, and
2 got an understanding basically of what the patent does and
3 what part of the business world it really fits into.

4 And what you can see from this slide is, basically, I've
5 got an understanding, I think, what everybody else has, is
6 that the patent relates to improving buffer status reporting.

7 And as a practical matter, what it does in the handset,
8 I think both Mr. Jones and Dr. Caloyannides have said, is
9 that it improves the performance in the uplink. In other
10 words, it makes the overall wireless system run a little more
11 efficiently.

12 Q. Why does improved uplink performance matter?

13 A. Well, it matters just in a very general sense to the
14 wireless carriers, as well as to us because what we really
15 want to be able to do is have our data go into and out of the
16 phone relatively quickly.

17 Q. And this document you've shown to the jury is PX-156,
18 right?

19 A. That's right.

20 Q. Who created this document?

21 A. This document comes from a company called Ericsson.
22 Ericsson makes base station equipment or infrastructure
23 equipment that is used in a wireless network.

24 Q. And who is the intended audience of a document like
25 this?

1 A. This -- the intended audience, really, are the wireless
2 carriers themselves, so AT&T and Sprint. And what they're
3 really trying to show here is that, at least from their
4 study, Ericsson's study, what's important to -- to -- to
5 consumers is having fast uploads and fast downloads, which is
6 really what's on this chart.

7 Q. Okay. But does this document say anything about buffer
8 status reporting?

9 A. No, sir, it doesn't.

10 Q. And are you telling this jury that the '820 patent is
11 the only thing that improves up -- uplink capacity or
12 performance in LTE?

13 A. No, sir. There's lots of things that help to improve
14 performance, but this is -- in an LTE network. But this is
15 just to point out that this is part of what this technology
16 does. So I know that it's not something else that has to do
17 with another part of the operation of a network or a phone.

18 This is just solely to discuss that we need to narrow in
19 on what exactly the technology does in order to be able to
20 understand what damages would be.

21 Q. All right. You're showing us a document from Ericsson
22 to the carriers. How does Apple fit in?

23 A. Well, Apple actually kind of fits into the middle of
24 what is a pretty complicated set of wireless industry
25 relationships. You can see Apple is sort of down there in

1 the third box from the bottom there.

2 But what's really going on here is that Apple winds up
3 having to provide us, the consumers who are on the bottom,
4 all of those people, with phones and handsets that we all
5 like to have that meet our needs.

6 At the same time Apple has to work with Verizon and
7 Sprint and the other wireless carriers to make sure that
8 they're putting equipment onto the networks that actually
9 meet their specifications; in other words, that Verizon and
10 Sprint have specs on how to -- what needs to -- what needs to
11 go into their networks.

12 And then NSN and Ericsson, people who are making the
13 base station equipment, are working with Verizon and Sprint
14 in order to be able to build networks that are efficient and
15 keep on being able to provide the type of data transfers that
16 we all are getting used to on our phones.

17 Q. Have you seen anything measuring or quantifying the
18 benefits that are specifically enabled by the '820 patent?

19 A. No, I haven't.

20 Q. All right. Well then, how are you able to go about
21 determining what a royalty should be in this case?

22 A. Well, in the circumstance where you don't have any
23 detail about the benefit of the specific -- the use of a
24 patent, then what you would wind up doing is taking a look at
25 prior licensing history, what the industry might have paid

1 for using the technology, and so forth.

2 So sometimes quantifying it for the benefit of a
3 particular technology is just not possible. It's not part of
4 the daily accounting records that one can see or the
5 measurements that might be done technically. So that leaves
6 us with trying to understand it based on other measures, in
7 this case I've looked at licenses.

8 Q. All right. Well, before we jump into the licenses
9 themselves, are there any rules or frameworks that you
10 followed in order to determine the royalty owed to CCE in
11 this case?

12 A. Yes, there are.

13 So Judge Mitchell is going to instruct you-all on the
14 law, but the very first place I start with -- and I believe
15 this showed up also in one of the openings -- is the patent
16 damages statute. And what the -- what the statute says is
17 that if you, the jury, should find that the '820 patent were
18 valid and infringed, then CCE would be entitled to damages
19 that would be adequate to compensate for the infringement but
20 in no event less than a reasonable royalty for the use made
21 of the invention. And that's the important part, that we're
22 talking about a reasonable royalty for the use made of the
23 invention.

24 Q. Now, you already told us that it's your opinion that
25 15 cents per device is appropriate. Why did you conclude

1 that a per-device or a per-unit format was appropriate in
2 this case?

3 A. There are a number of reasons but one of them is simply
4 because of this term, that we're trying to measure the use
5 made of the invention. And we know that the invention is
6 actually included in every one of the phones that is accused
7 of infringement. And, so, therefore, by using a royalty that
8 measures each individual unit, we're accounting for the use
9 made of the invention.

10 Q. All right. Let's go to Slide 14.

11 THE COURT: Mr. Curry, is this a good stopping
12 point?

13 MR. CURRY: This is.

14 THE COURT: Okay. Good. We're going to take our
15 lunch break now, Ladies and Gentlemen of the Jury. The jury
16 will be in recess until 1:30.

17 COURT SECURITY OFFICER: All rise.

18 (Jury out.)

19 THE COURT: Please be seated.

20 I just wanted to let you all know that I have
21 several criminal matters I need to take up over the lunch
22 break. So I don't need you to clear everything off of
23 counsel table, but I need you to make it where a couple of
24 lawyers and their clients can stand at counsel table, okay?

25 And those begin a little before 1:00, and I think

1 we'll be through easily by 1:30. But if you come in and see
2 me, I'll be in the middle of something. You're welcome to
3 come in but just stay behind the bar, okay?

4 || We'll be in recess until 1:30.

5 || COURT SECURITY OFFICER: All rise.

6 (Recess.)

8 || CERTIFICATION

10 IT IS HEREBY CERTIFIED that the foregoing is a
11 true and correct transcript from the stenographic notes of
12 the proceedings in the above-entitled matter to the best of
13 our abilities.

14

15

16 /s/ _____ CHRISTINE BICKHAM, CRR, RMR September 8, 2016
Official Court Reporter

SHEA SLOAN, CSR, RPR
Official Court Reporter

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